

VARTANYAN, L.S.

USSR/ Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry.
Catalysis

B-9

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11229

Author : Vartanyan L.S., Knorre D.G., Mayzus Z.K., Emanuel' N.M.

Title : Kinetic Characteristics of n-Decane Oxidation Following the Initial
Macroscopic Stage of Catalyst Transformation

Orig Pub : Zh. fiz. khimii, 1956, 30, No 3, 665-675 (English summary)

Abstract : Co stearate and Mn laurate which catalyze oxidation of n-decane at 140°, undergo in the course of the reaction a cycle of valency transformations which terminates by a separation of the catalyst into the precipitate (RZhKhim, 1955, 36911; 1956, 35357). Removal of catalyst precipitate (CP) does not affect the kinetics of accumulation of alcohols, carbonyl compounds, acids and esters. Concentration of peroxide increases after removal of CP to a value characteristic of non-catalyzed oxidation. It is shown by calculations that the results obtained can not be explained in the scope of the generally accepted chain scheme of oxidation of hydrocarbons, since this scheme assumes that rate of accumulation of final oxidation products, after removal of CP, should decrease, and kinetic

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U curves approach the curves of non-catalyzed oxidation. The authors consider that during the initial macroscopic stage of catalyst transformation there are formed metal-free intermediate compounds which ensure progress of the process at a rate characteristic of catalyzed oxidation, also after removal of CP.

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USSR/ Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry.
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Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11231

Author : Vartanyan L.S., Mayzus Z.K., Emanuel' N.M.

Title : Kinetic Characteristic of Hydroperoxides as Intermediate Products of
the Reaction of Oxidation of n-Decane

Orig Pub : Zh. fiz. khimii, 1956, 30, No 4, 856-861

Abstract : Decomposition of hydroperoxide formed on oxidation of n-decane (I) at 120-140° was studied in a medium of I, oxidized to different extent. The reaction in of 1-st order and values of velocity constant decrease with increasing extent of oxidation of I. Energy of activation of hydroperoxide decomposition, with a constant extent of oxidation, is 24 kcal/mole. Comparison of summative kinetic curve of the rate of formation of final reaction products (alcohols, carbonyl compounds, acids and esters) with kinetic curve of hydroperoxide decomposition rate, shows that the main portion of final oxidation products (~80%) is formed as a result of decomposition of intermediate hydroperoxide.

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Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11230

Author : Vartanyan L.S., Mayzus Z.K., Emanuel' N.M.

Title : On Sequence of Formation of Oxidation Products of n-Decane

Orig Pub : Zh. fiz. khimii, 1956, 30, No 4, 862-870

Abstract : To determine the sequence of formation of oxidation products of n-decane use was made of the kinetic procedure of removing from the reaction mixture (at a certain moment of the reaction) the intermediate product of oxidation -- the hydroperoxide(I). Study of the subsequent kinetics of accumulation of the final reaction products shows that removal of peroxides affects mostly the kinetics of formation of alcohols, to a lesser extent the kinetics of carbonyl compounds, and has practically no effect on kinetics of accumulation of the acids. Products of decomposition of I, formed on oxidation of decane, are alcohols and carbonyl compounds. Acids are not formed directly on decomposition of I. The results obtained indicate the following sequence in the formation of products:

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Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11230

→ alcohols
I ↓
ketones → acids. Mathematical analysis of the form of kinetic
curves of oxidation product accumulation after removal of peroxides,
yields in the case of such a sequence, results that coincide with ex-
perimental data.

was interrupted at any desired moment and the whole
sample analyzed, giving the content of all the products pre-

VARTANYAN, L.S.; EMANUEL', N.M.

Inactivation of lactic dehydrase by free radicals formed from
inhibitors of radical processes. Dokl. AN SSSR 143 no.5:1215-
1218 Ap '62. (MIRA 15:4)

1. Institut khimicheskoy fiziki AN SSSR. 2. Chlen-korrespondent
AN SSSR (for Emanuel').
(Dehydrases) (Radicals (Chemistry))

hh561
S/020/63/148/001/020/032
B144/B186

013450
5:1140
AUTHORS:

Vartanyan, L. S., Strigun, L. M., Emanuel', N. M.,
Corresponding Member AS USSR

TITLE: Kinetics of propylgallate autooxidation in aqueous solution

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 1, 1963, 97-100

TEXT: The course of the oxidation of propyl gallate (PG) which has an antitumor and radiation-protective effect was determined polarographically in a borate buffer of pH 7.2 - 7.4 at a constant temperature of 21°C. Consistently with data published on PG in acetate buffer, the half-wave potential depended linearly on the pH of the medium within the pH range 7.1 - 8.6. The PG oxidation rate increased with increasing pH and showed a linear dependence on the OH^- ion concentration, which indicates that PG ions with a single charge react. The reaction is first-order with respect to the initial PG concentration. Moreover a zero-order reaction with respect to the process concentration was found, which may be explained by intermediate formation of quinone. This is converted with an increasing rate to semiquinone by reacting with PG. The temperature

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Kinetics of propylgallate ...

S/020/63/148/001/020/032
B144/B186

dependence of the oxidation rate was studied at pH 7.6 and 8.8. The activation energy derived from these data was 18000 ± 700 cal/mole and is attributed to the ionized semiquinone molecule. A steep wave with a half-wave potential of 1.17 v was detected polarographically in the PG oxidate (buffer pH 7.2). By separate tests it was proved that this wave is due to the presence of H_2O_2 , and this was identified also by the qualitative reaction with $(TiO_2 + H_2SO_4)$. The presence of further oxidation products resulted from the 0.03 v difference between the half-wave potentials of H_2O_2 and the PG oxidate. A complete scheme of PG oxidation in aqueous solution is given. The formation of free-radical intermediate products may explain the different behavior of phenol inhibitors in biological experiments. There are 4 figures. ✓

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

SUBMITTED: August 10, 1962

Card 2/2

AGATOVA, A.I.; VARTANYAN, L.S.; EMANUEL', N.M.

Mechanism by which free radicals formed from inhibitors of
radical processes interact with the SH groups of proteins.
Dokl. AN SSSR 150 no.3:547-550 My '63. (MIRA 16:6)

1. Institut khimicheskoy fiziki AN SSSR. 2. Chlen-korrespondent
AN SSSR (for Emanuel').
(Proteins) (Thiols) (Radicals(Chemistry))

VARTANYAN, L.S.; GONIKBERG, E.M.

Determination of the thermodynamic constants of ionization of
propyl gallates in aqueous solution. Izv. AN SSSR. Ser. khim.
no.11:2047-2049 N '63. (MIRA 17:1)

1. Institut khimicheskoy fiziki AN SSSR.

VARTANYAN, L.S.; GONIKBERG, E.M.; EMANUEL', N.M.

Effect of propyl gallate on the kinetic constants of the
enzymatic reduction reaction of sodium pyruvate. Dokl. AN
SSSR 154 no.1:223-225 Ja'64. (MIRA 17:2)

1. Chlen-korrespondent AN SSSR (for Emanuel').

VARTANYAN, L.S.; GONIKBERG, E.M.; EMANUEL', N.M.

Kinetics of inactivation of lactic dehydrogenase with radical
products of propyl gallate autoxidation. Izv. AN SSSR. Ser.
khim. no.10:1742-1748 O '64. (MIRA 17:12)

1. Institut khimicheskoy fiziki AN SSSR.

VARTANYAN, I. V., Physician

"Macro and Microscopic Structure of the Middle Membrane of the Pulmonary Artery." Sub 22 Oct 51, Second Moscow State Medical Inst Imeni I. V. Stalin.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

VARTANYAN, L.V. (Yerevan, Arm.SSR, ul. Shanyana, d. 10. pod"ezd III, kv. 4)

Structure of the wall of the pulmonary artery. Arkh.anat.gist.
1 embr. 33 no.3:66-67 J1-S '56. (MIRA 12:11)

1. Iz kafedry normal'noy anatomii (zav. - prof.I.P.Ayvazyan)
Yerevanskogo med. instituta.
(ARTERIES, PULMONARY, anatomy and histology,
(Rus))

VARTANYAN, L.V., assistant

Role of the vagus nerves in the organization of the solar plexus.
Trudy Erev.med.inst. no.11:121-128 '60. (MIRA 15:11)

1. Iz kafedry normal'noy anatomii (zav. kafedroy dotsent A.M.
Akopyan) Yerevanskogo meditsinskogo instituta.
(VAGUS NERVE) (SOLAR PLEXUS)

VARTANYAN, L.V.

Topography of the tibial nerve in the popliteal fossa and
its relation to the popliteal vessels. Zhur. eksp. i klin.
med. 3 no.4:81-87 '63 (MIRA 16:12)

VARTANYAN, L.Ye.; kand.tekhn.nauk

Calculating the duration of a production cycle under continuous-
production conditions. Sbor. nauch. trud. ErPI no. 20:127-136
'59. (MIRA 14:5)
(Factory management)

CA

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A vacuum method for the determination of carbon dioxide in wine. M. D. Vartanyan. *Vinodella i Vinogradarstvo S.S.S.R.* 10, No. 7, 49-52 (1960).—The method is based on the removal of CO_2 from wine under vacuum, trapping the CO_2 in a 0.1 N Ba(OH)_2 soln., filtering the BaCO_3 , and then titrating the Ba(OH)_2 soln. The amt. of HCl necessary to dissolve the BaCO_3 is also detd. Vartanyan claims the method to be superior to that of Vecher and Greshnob.
S. Gwilleb

USSR •

Dependence of frost resistance of vine on biochemical changes occurring in the plant. M. D. Vartanyan. *Vinodelie i Vinogradarstvo S.S.S.R.* 17, No. 11, 63-64 (1952).--
The frost resistance of a vine depends primarily on the sugar concn. of the juice of the vine cells and tissues, which in turn depends on the temp. The amt. of sugar in 4 different vines changes from month to month, the largest differences being as follows: September (min. temp. $+2.7^{\circ}$) 4.34-5.43, February (-20.3°) 12.10-13.04, and April ($+4.6^{\circ}$) 3.09-4.26% of the abs. dry substance (I). In September, when the temp. starts to drop, starch is accumulating and being transformed into sugar in the vine stalks. The amt. of sugar in the plants is higher when they are wintering without a covering: covered plants 7.10-8.52, non-covered plants 8.27-9.00% of I, resp. (av. data from November to February for 4 different vine varieties). Also the vine stalks contg. a higher amt. of I (better matured plants) are more frost resistant. The vine stalks contain 20-30% sugar, as compared with the amt. of starch, during summer, this amt. increases to 50-80% toward the end of the vegetative period. The transformation of starch into sugar in the plant cells increases by applying a full NPK fertilizer (in spring) followed by 2 PK supplements (applied before the flowering time and in August); pos. effects were also obtained by pinching (in May-July) and stumping (in August) the vine bushes. On the contrary, by watering the plants too often the frost resistance of vine decreases, owing to a less favorable chem. compn. of such plants. Vine plants watered 7 times (a) and those watered 4 times (b) during the vegetative period under the climatic conditions of Uzbekistan showed the following chem. compn. (detd. in October, November, December, and January): I, (a) 42.43, 40.78, 43.10, and 42.75; (b) 48.65, 45.70, 49.43, and 49.30%; sugar (a) 2.24, 3.94, 4.04, and 6.00; (b) 2.73, 4.45, 5.04, and 7.54% of I; and starch, (a) 16.60, 10.45, 12.15, and 7.91; and (b) 11.11, 7.54, 9.22, and 6.45% of I, resp.
B. Wierbicki

VARTANYAN, P. N.

USSR

A device for the determination of respiration of fruit.
M. B. Vartanyan (Uzbek Sci. Research Inst. Viticulture).
Trudy Vsesoyuznogo Nauchno-Issledovatskogo Instituta Vinogradovodstva i Vinodeliya S.S.S.R. 13, No. 1, 68-6 (1953).
The preservation of fruit during long storage and transportation depends greatly on the intensity of its respiration. The degree of ripeness is determined by the amt. of CO_2 given off. For the determ., a desiccator, sufficiently large enough, is connected to two wash bottles contg. 0.1N $\text{Ba}(\text{OH})_2$ (I). A second glass tube extending from the bottom of the desiccator is connected to a third gas-washing bottle contg. 40-50% KOH or NaOH (II). It is connected to an aspirator through a CaCl_2 tube. From 1 to 2 kg. grapes is placed in the desiccator and the system closed. The desiccator is connected directly to an aspirator and air displaced, drawing in CO_2 -free air through II. After 2.5-3 hrs., I is placed in the system and aspiration continued for approx. 2 hrs. The contents of I are filtered and an aliquot of the filtrate is titrated with standard H_2SO_4 with methylene yellow. The results are expressed in ml. CO_2 per kg. grapes per hr.
S. B. Raddig

ARTANYAN, M. D.

VARTANYAN, M. D. - "The Biochemical Processes Occurring in the Grape Vine in Connection with Agricultural-Engineering Procedures Directed toward Increasing Its Frost Resistance." Min Higher Education USSR. Central Asia State U imeni V. I. Lenin. Tashkent, 1955.
(Dissertation for the Degree of Candidate of Biological Sciences)

So; Knizhnaya Letonis', No 3, 1956

USSR/Cultivated Plants - Fruits. Berries.

M-6

Abs Jour : Ref Zhur - Biol., No 7, 1958, 30066

Author : Vartanyan, M.D.

Inst : -

Title : The Dependence of Frost Resistance in Grape Buds on the Concentration of Cellular Fluid.

Orig Pub : Vinodleiye i vinogradarstvo SSSR, 1957, No 2, 37-38.

Abstract : The mineral salt and soluble sugar content in grape shoots left after frost and damage is considered as the basic substances which determine the concentration of cellular fluid. The shoots whose buds suffered from the frosts contained considerably less soluble sugar than shoots with healthy buds. The sum of soluble sugars and mineral substances in the cellular fluid of those shoots whose buds perished was 4% less than in those undamaged. This confirms the relation of frost resistance to the concentration of cellular fluid and the content of protective substances.

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USSR/Cultivated Plants - Fruits. Berries.

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Abs Jour : Ref Zhur - Biol., No 7, 1958, 30066

The increased cell fluid concentration in the shoots during fall, which is needed to insure greater frost resistance, may be induced by proper fertilization, timely stopping of irrigation and performing green operations at the best moment.

Card 2/2

... ..
CHELNOKOV, Vasiliiy Stepanovich, kand.ekonom.nauk; VARTANYAN, M.Kh., red.;
GAMZAYEVA, M., tekhn.red.

[Transition from capitalism to socialism. The victory of socialism
in the U.S.S.R.; lectures in the course on political economy]
Perekhodnyi period ot kapitalizma k sotsializmu. Pobeda sotsializma
v SSSR; lektsii po kursu politicheskoi ekonomii. Moskva, Gos.izd-vo
"Sovetskaiia nauka," 1957. 46 p. (MIRA 11:1)
(Russia--Economic policy)

VARTANYAN, M.M.

Effect of perinatal diathermy on the autonomic nervous system activity of the fetus in hypertensive women. *Arch. Dis Child* 1965;40:115-121

(PREF 78:20)

1. Otdeleniye fiziologii i patologii bieremennosti (zav. - prof. S.M.Bekker) i laboratoriya normal'noy i patologicheskoy fiziologii (zav. - prof. N.L.Garnacheva) Instituta zhenshchiny i ginekologii (direktor - chlen-korrespondent AMN SSSR prof. M.A.Petrov-Matlaikov) AMN SSSR, Leningrad.

VARTANYAN, M.M.

Hypertension and the fetus. Zhur. eksp. i klin. med. 5 no.2:
90-98 '65. (MIRA 18:10)

VARTANYAN, M.Ye.

Results of lithium carbonate therapy of agitation states. Zhur. nevr.
i psikh. 59 no.5:586-589 '59. (MIRA 12:7)

1. Institut psikhatrii (dir. - prof. D.D. Fedotov) Akademii meditsinskikh
nauk SSSR, Moskva.

(CARBONATES, ther. use,
lithium carbonate, tranquilizing ther. (Rus))

(LITHIUM,
same)

(TRANQUILIZERS, ther. use,
lithium carbonate (Rus))

VARTANYAN, M.Ye.

Therapeutic use of lithium salts in the treatment of mental diseases.
Vop. psikh. no.4:215-219 '60. (MIRA 15:2)

(LITHIUM SALTS--THERAPEUTIC USE)
(MENTALLY ILL--CARE AND TREATMENT)

VARTANYAN, M.Ye.; KAZANETS, E.F.; LIBERNAN, Yu.I.; FAYVISHEVSKIY, V.A.

Statistical analysis of late sequelae from a closed injury of the
head. Vop. psikh. no.4:284-289 '60. (MLA 15:2)
(HEAD__WOUNDS AND INJURIES)

VARTANYAN, M.Ye. (Moskva)

Basic trends in present-day research in the field of the
pathogenesis of schizophrenia; from data in the foreign literature.
Zhur.nevr.i psikh. 62 no.8:1236-1253 Ag '62. (MIRA 15:12)
(SCHIZOPHRENIA)

L 16938-65 Pb-4/Pa-4 AFWL/AMD

ACCESSION NR: AP5002837

S/ 063/6L/009/00L/0362/0372

THE EFFECT OF THE ...

ON THE ...

BY ROBERT ...

Abstract: This article reviews the ...

Results of ...

L 16938-65

ACCESSION NR: AP5002837

practical importance, of whether such secondary manifestations are active participants in the pathogenic mechanisms of schizophrenia arises.

ASSOCIATION: none

DEVELOPMENT:

NO REF SUB: 020

OTHER: 050

AFAS

Card 2/2

L 16937-65 Pa-4 AMD

ACCESSION NR: AP5002838

S/0063/64/009/004/0462/0466

AUTHOR: Efroimson, V. P.; Vartanyan, M. Ye. (Candidate of medical sciences) *EF*

TITLE: Achievements of the genetics and phenogenetics of certain psychic disorders

SOURCE: Vsesoyuznoye khimicheskoye obshchestvo. Zhurnal, v. 9, no. 4, 1964, 462-466

TOPIC TAGS: psychoneurotic disorder, genetics

Abstract: This article is a survey of current concepts regarding the role of genetic factors in the incidence of certain psychic disorders, with emphasis on schizophrenia as the most complex and interpretation of the basic data from the literature of the last few years. Key word references are listed.

Stress is placed on comparative studies of the incidence of manic-depressive psychosis and schizophrenia in identical and fraternal twins, since this permits the separation of genetic factors from environmental and other factors. In addition, studies of the incidence of manic-depressive psychosis in monozygotic twins have been clearly proven; it has not yet been established what genetic factors, exactly, are responsible for their relation to specific or chemical deficiency.

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L 16937-65

ACCESSION NR: AP5002838

cles in schizophrenia victims. This disorder is considered as a group concept rather than a single, well defined illness. Orig. art. has 2 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: PH, LS

NO REF SOV: 002

OTHER: 027

JPRS

Card 2/2

VARTANYAN, M.Ye. (Moskva)

Expansion of biological research in psychiatry. Zhur. ne~~z~~. i.
psikh. 63 no. 6:804-813 '63. (MIRA 17:6)

VARTANYAN, M. Ye.

VARTANYAN, M. Ye. - "The Problem of the Effect of Cutting Systems on Certain Operating Indexes of Machine Parts." Min Higher Education USSR. Yerevan Polytechnic Inst imeni K. Marks. Yerevan, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

So; Knizhnaya Letopis' No 3, 1956

VARTANYAN, M.Ye.

Effect of cutting conditions on the durability of machine parts
subjected to repeated static loads. Sbor.nauch.trud. ErPI no.10:
73-85 '56. (MLRA 9:12)

1. Kafedra tekhnologii mashinostroyeniya Yerevanskogo politekhnicheskogo instituta.
(Metal cutting) (Strains and stresses)

VARTANYAN, M.Ye., kand.tekhn.nauk

Characteristics of deformation and breakdown of machine parts caused by repeated static overloads under combined stressed conditions and the effect of the relief of surfaces on the strength of parts. Sbor. nauch. trud.ErPI no, 20:91-98 '59. (MIRA 14:5)
(Metals--Fatigue)

VARTANYAN, N.G.
BABAYAN, A.T.; MKRYAN, G.M.; VARTANYAN, N.G.

Isomerization of 1-dialkyl aminobutenes-2. Dokl. AN Arm. SSR 19 no.3:
83-84 '54. (MLBA 8:7)

1. Predstavleno A.L. Mndzhoyanov. (Butene)

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710011-9

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710011-9"

VARTANYAN, N. G.

6

Cleavage of quaternary ammonium bases. I. Syn-
thesis of mixed tertiary amines. A. I. Babayan, N. G.
Vartanyan, and I. Ya. Zhuravov (Zhurnal. Priklad.
Khim. 25, 1610-13 (1956).--To 25 g. (CH₃-
CMeCH₂)₂MeCCl:CHCH₂)NHBr heated on a steam bath
was added 14 g. NaOH in 30 ml. H₂O, resulting in distn. of
7.8 g. liquid and 1.5 l. gaseous product; the latter forms an
explosive Ag salt (vinylacetylene and chloroprene mixt.),
while the liquid was mainly chloroprene. The acidic solu-
treated with NaOH gave (CH₃:CHCH₂)₂NH, b₃₀ 58-60°;
picrate, m. 112°. Thus, 78 g. Me₂(PhCH₂)₂(MeCCl:CH-
CH₂)NCl and aq. NaOH gave vinylacetylene, chloroprene,
and 32 g. Me₂NCH₂Ph, b₃₀ 170-2° (picrate, m. 91.5-5°).
MeEt(MeCCl:CHCH₂)₂NHBr similarly gave 77.4% MeEt-
(MeC:CCl₂)N, b₃₀ 133-5°, n_D²⁰ 1.4307, d₄ 0.8165, and 5.8
g. MeEt(MeCCl:CHCH₂)₂N, b₃₀ 152-5°, n_D²⁰ 1.4529, d₄
0.9316. Me(PhCH₂)₂(MeCCl:CHCH₂)₂NCl gave 61% Me-
(PhCH₂)₂NCH₂CiCMe, b₃₀ 115-16°, d₄ 0.951, n_D²⁰ 1.521,
and a lesser yield of C₁₀H₁₁N, b₁ 138-60° (crude), b₁ 135-40°,
d₄ 0.99074, n_D²⁰ 1.5559, which is either MeN(CH₂C:CMc)-
(CHPhCH₂C:CMc) or MeN(CH₂C:CMc)(CH(CH₂Ph)C:
CMc). MeEt(PhCH₂)₂(MeC:CCH₂)₂NHBr similarly gave
MeEt(PhCH₂)₂N, b₃₀ 190-51, b₃₀ 187-90°, d₄ 0.9215, n_D²⁰
1.5068 (picrate, m. 113.5-14.5°). G. M. Kosolapoff.

(2)

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710011-9

VAR. TAN. 194

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710011-9"

BABAYAN, A.T.; MARTIROSYAN, G.T.; VARTANYAN, N.G.; INDZHIKYAN, M.G.

Amines and ammonium compounds. Part 12: Synthesis of some
amines. Zhur.ob.khim. 30 no.7:2263-2267 J1 '60.
(MIRA 13:7)

1. Institut organicheskoy khimii Akademii nauk Armyanskoy SSR.
(Amines)

KASHARSKIY, E.G.; VARTAN'YAN, N.V.

Characteristics of a series of turbogenerators with an increased
power rating. Sbor. rab. po vop. elektromekh. no.6:200-215 '61.
(MIRA 14:9)

(Turbogenerators)

VARTANYAN, O.

Useful initiative. Prom.koop. no.7:44-45 J1'55. (MIRA 8:11)

1. Predsedatel' pravleniya arteli "Kulevik"
(Erivan--Automobiles--Repairing)

VARTANYAN, O.A.; KOLBINSKIY, P.V.

Improving the living conditions of railroad workers. Put' 1 put.
khoz. 6 no.2:35 '62. (MIRA 15:2)

1. Zamestitel' nachal'nika Ostrogozhskoy distantzii puti,
Yugo-Vostochnoy dorogi (for Vartanyan). 2. Smotritel' zdaniy
Ostrogozhskoy distantzii puti, Yugo-Vostochnoy dorogi (for
Kolbinskiy).

(Railroads--Buildings and structures)

VARTANYAN, R. R.
LUKOMSKIY, S.I.; VARTANYAN, E.A.

Electromagnetic vibrators with impact action considered as a
vibrating system with limiters. [Trudy] VNIISTroidomash no.14:
29-34 '57. (MIRA 10:6)

(Vibrators)

VARTANYAN, S. A.

Cand Chem Sci

Dissertation: "Syntheses and Transformations of Vinyl-Ethi-nyl-
Carbinols Containing Alkoso Groups."

29 Nov. 49

Inst of Organic Chemistry, Acad Sci USSR

SO Vecheryaya Moskva
Sum 71

VARTANYAN, S. A.

"Acetylene derivatives. 117. Synthesis and transformations of vinyl ethinyl carbinols containing a methoxy group." I. N. Nazarov and S. A. Vartanyan. (p. 1582)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1950, Vol 20, No 9.

CA

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Acetylene derivatives. CXVIII. Condensation of vinylacetylene with dimethoxy ketones. Synthesis and transformations of vinylacetylenecarbinols containing two methoxy groups. I. N. Nazarov and S. A. Varshavskiy. *Zhur. Obshch. Khim. (J. Gen. Chem.)* 20, 1829 (1950); cf. C.A. 45, 1905h. —Hydration of $(\text{CCH}:\text{CH})_2$ (I) does not require the use of a H_2SO_4 catalyst. Thus, stirring 500 g. 95% MeOH, 100 g. I, 5 g. H_2SO_4 , and 0.5 g. pyrogallol 20 hrs. at 60–65° with occasional addn. of 15 g. H_2SO_4 in small portions gave, upon concn., neutralization with Na_2CO_3 , drying, and distn., 104 g. crude 1,5-dimethoxy-3-hexanone, b.p. 94–103°; redistn. gave the pure substance (II), b.p. 78–81°, n_D^{20} 1.4275. Passage of 70 g. $\text{CH}_3\text{CH}:\text{CH}:\text{CH}:\text{CH}$ with cooling for 2.5 hrs. into a Grignard reagent from 12 g. Mg and 65 g. EtBr in 200 ml. Et₂O, stirring 2 hrs., and refluxing 1 hr. until C_2H_4 evolution stopped, followed by addn. over 4 hrs. of 80 g. II in 1 vol. Et₂O with cooling, stirring 4 hrs., longer, treatment with 8% HCl, and neutralization of the org. layer with NaHCO_3 gave 67 g. $(\text{MeOCH}_2\text{CH}_2)_2\text{C}(\text{OH})\text{C}(\text{CH}_3)_2$ (III), b.p. 93–5°, n_D^{20} 1.4717, d_4^{20} 0.9023, polymerizes on standing. Hydrogenation of III over Pt gave the solid analog, b.p. 109–12°, n_D^{20} 1.4350, d_4^{20} 0.9050, which is readily obtained also from II and BuMgCl. Stirring 60 g. III with 60 g. 50% H_2SO_4 at 20° 80 min. gave 32 g. $(\text{MeOCH}_2\text{CH}_2)_2\text{C}(\text{CH}_3)\text{CH}(\text{OMe})\text{CH}_2$ (IV), b.p. 97–100°, n_D^{20} 1.4861, d_4^{20} 0.9250, obtained in poorer yield with much tar when H_3PO_4 (d. 1.7) is used for dehydration at 60°. Hydrogenation of IV over Pt oxide gave the solid analog, b.p. 93–3°, n_D^{20} 1.4201,

d_4^{20} 0.9083. Stirring 20 g. III, 17 g. MeOH, and 1 g. H_2SO_4 8 hrs. at 35–40°, with addn. of 2.5 g. H_2SO_4 , gave 7.5 g. $(\text{MeOCH}_2\text{CH}_2)_2\text{C}(\text{MeOCH}_2\text{CH}_2)\text{C}(\text{CH}_3)_2\text{CH}_2$, b.p. 117–20°, n_D^{20} 1.4710, d_4^{20} 0.9082, which on hydrogenation gave the solid analog, b.p. 120–31°, n_D^{20} 1.4450, d_4^{20} 0.9501. Stirring 10 g. III with 2 g. H_2SO_4 in 20 g. MeOH 8 hrs. at 40°, followed by standing overnight and repeated stirring for 10 hrs., with addn. of 3 g. H_2SO_4 , and standing overnight gave 6 g. $(\text{MeOCH}_2\text{CH}_2)_2\text{C}(\text{MeOCH}_2\text{CH}_2)\text{C}(\text{CH}_3)_2\text{CH}_2$, b.p. 120–31°, n_D^{20} 1.4699, d_4^{20} 0.9932, which formed no solid semicarbazone or 2,4-dinitrophenylhydrazone, while on hydrogenation it gave the solid analog, b.p. 125–8°, n_D^{20} 1.4415, d_4^{20} 0.9680, whose behavior is similar. Ozonolysis of the unsatd. ketone gave II and $\text{MeOCH}_2\text{CH}_2\text{C}(\text{OH})\text{CH}_2$, b.p. 200–1°, n_D^{20} 1.4280. Addn. of 174 g. $\text{MeCH}(\text{OMe})\text{CH}_2\text{COCHMeCH}_2\text{OMe}$ to the Grignard reagent from 24 g. Mg, 110 g. EtBr, and 78 g. $\text{CH}_3\text{CH}:\text{CH}:\text{CH}:\text{CH}$ and stirring 4 hrs. gave 98 g. $(\text{MeOCH}_2\text{CH}_2)_2\text{C}(\text{MeOCH}_2\text{CH}_2)\text{C}(\text{CH}_3)_2\text{CH}_2$, b.p. 106–8°, n_D^{20} 1.4730, d_4^{20} 0.9007, which on hydrogenation over Pt gave the solid analog, b.p. 97–0°, n_D^{20} 1.4400, d_4^{20} 0.9134. Stirring the unsatd. carbinol (20 g.) with 20 g. 50% H_2SO_4 1.5 hrs. at 50° gave 7.5 g. $(\text{MeOCH}_2\text{CH}_2)_2\text{C}(\text{MeOCH}_2\text{CH}_2)\text{C}(\text{CH}_3)_2\text{CH}_2$, b.p. 95–8°, n_D^{20} 1.4020, d_4^{20} 0.9117, which on hydrogenation over Pt gave the solid analog, b.p. 75–8°, n_D^{20} 1.4350, d_4^{20} 0.8755. CXIX. Mechanism of the hydration and cyclization of 3-ynes in reactions of hydration and cyclization. I. N. Nazarov and S. S. Bakhmutskaya. *Ibid.* 1937 41. Addn. of 19 g. MeCOCHMe and 31 g. $\text{CH}_3\text{CH}:\text{CH}:\text{CH}$ in 50 ml. Et₂O to 28 g. powd. KOH in 200 ml. Et₂O with stirring at 15° and stirring 6 hrs. at room temp. gave upon neutralization with 10% HCl 25 g. $(\text{MeOCH}_2\text{CH}_2)_2\text{C}(\text{CH}_3)\text{CH}:\text{CH}:\text{CH}_2$.

b, 64-6°, n_D^{25} 1.4760, d_4^{25} 0.8860, hydrogenated over Adams' Pt catalyst in MeOH to the *satd. analog*, bp 172-4°, n_D^{25} 1.4365, d_4^{25} 0.8340. Stirring 22 g. 1 and 22 g. 60% H_2SO_4 40 min. at 60-65° gave 0.7 g. 5,6-dimethyl-1,5-heptadien-3-yne (II), bp 47-50°, n_D^{25} 1.5158, d_4^{25} 0.8204, as well as a small amt. of the cyclic ketone, MeCH₂COCH=CMe₂CMe, as

b, 70-72°. Stirring 4.5 g. II with 4.5 ml. H_3PO_4 (d. 1.75) 2 hrs. at 60-5° gave 3 g. III, b, 70°, n_D^{25} 1.4695; semicarbazone, m. 173°. Stirring 8 g. II with 35 g. SO_2 , MeOH, 0.6 ml. H_2SO_4 , and 4 g. $HgSO_4$, 8 hrs. at 60-5° gave 8.4 g. mixed products which yielded 2.8 g. 5,6-dimethyl-2-methoxy-5-hepten-4-one (IV), b, 81-84°, n_D^{25} 1.4560, d_4^{20} 0.9216; the rest was apparently 5,6-dimethyl-1,5-heptadien-4-one (V), since heating 7 g. crude product with a trace of *p*-MeC₆H₄SO₃H to 131° and 145 mm. gave MeOH and 5.6 g. V, b, 50-51° (lit.¹ 50-51°), n_D^{25} 1.4775, d_4^{20} 0.9032 [2,4-dinitrophenylis (VI) (lit.¹ 70-71°), n_D^{25} 1.4775, d_4^{20} 0.9032]; V polymerizes rapidly to hydratone, m. 164° (from MeOH); V polymerizes rapidly on standing. I (13.4 g.) stirred with 14 ml. H_2PO_4 (d. 1.75) 4 hrs. at 60-5° gave 8 g. 1,2,2,3-tetramethyl-3-cyclopenten-3-one (VI), b, 74-0.5°, n_D^{25} 1.4742, d_4^{20} 0.9206;

[illegible]

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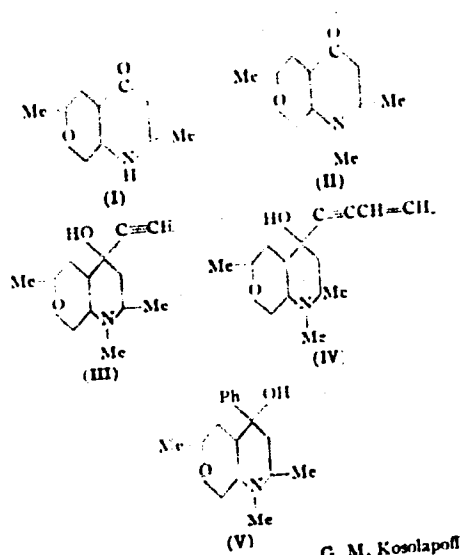
Acetylene derivatives. CXXV. Syntheses based on di-vinylacetylene. Transformations of 2-methyl-4-vinylbutynyl-tetrahydropyran-4-ol. I. N. Nazarov and S. A. Vartanyan. *Zhur. Obshch. Khim.* (J. Gen. Chem.) 21, 374-83 (1951); cf. C.A. 45, 2665g, 7062e. Hydration of $(CH_3)_2CHC \equiv CH$ (cf. C.A. 39, 1611f), yields 2-methyltetrahydro-4-pyran, b.p. 100-70°, n_D^{20} 1.4440. This (175 g.) added at -10° to RMgBr from 220 g. EtBr and 100 g. $(CH_3)_2CHC \equiv CH$ in Et₂O, and stirred 6 hrs. at 20° and 1 hr. at reflux, gave on the usual treatment 108 g. 2-methyl-4-vinyltetrahydro-4-pyran-4-ol, b.p. 100-135°, n_D^{20} 1.5058, d_4^{20} 1.0252, which on standing polymerizes to a clear glass, while hydrogenation of the monomer readily yields the *t*-Bu analog, b.p. 80-90°, n_D^{20} 1.4610. Dehydration of the pyranol (120 g.) by heating 1.5 hrs. at 65° with 120 g. CaH_2 and 120 g. 60% H_2SO_4 gave 3,6-dihydro-2-methyl-4-vinyl-2H-pyran, b.p. 70-2°, n_D^{20} 1.5388, d_4^{20} 0.9563, which, hydrogenated over Pt oxide in EtOH, gave 2-methyl-4-butyltetrahydropyran, b.p. 70-80° (pressure is omitted), n_D^{20} 1.4380, d_4^{20} 0.8522, with a boiling odor. Stirring the dihydro deriv. (80 g.) with 500 g. 90% MeOH, 0.2 g. pyrogallol, 3 g. $HgSO_4$, and 1 drop H_2SO_4 , 4 hrs. at 62-5°, with 5 g. $HgSO_4$, gradually added, gave on concn. and the usual treatment 60 g. allyl 3,6-dihydro-2-methyl-2H-pyran-4-yl ketone, b.p. 94-5°, n_D^{20} 1.5050, d_4^{20} 1.0080; the product is accompanied by a little methoxy ketone formed by addn. of MeOH to the unsatd. link, and 2 distns. are needed for purification. Hydrogenation of the ketone over Pt in EtOH gave propyl 2-methyltetrahydropyran-4-yl ketone, b.p. 94-5°, n_D^{20} 1.4510, d_4^{20} 0.9541, whose 2,4-dinitrophenylhydrazone, m. 121-2° (from EtOH). Ozonolysis of the unsatd. ketone yields HCO_2H and β -hydroxybutyric acid, b.p. 80-3°, isolated as the Ag salt and further identified by dehydration to crotonic acid, m. 70-1°.

conc. unsatd. ketone (11 g.) shaken 20 min. with 110 g. concd. NH_4OH and 20 ml. EtOH and kept 4 hrs. at 80° gave 8 g. of a compd. (I), b.p. 110-17°, n_D^{20} 1.4950, d_4^{20} 1.0020, whose 2,4-dinitrophenylhydrazone m. 247-9° (from EtOH), whose 2,4-dinitrophenylhydrazone (60 g.) with 100 ml. 35% aq. heating the unsatd. ketone (60 g.) with 100 ml. 35% aq. $MeNH_2$ and 0.3 g. pyrogallol 2 hrs. at 70° gave 50.2 g. of a compd. (II), b.p. 110-13°, n_D^{20} 1.4880, d_4^{20} 1.0050, whose 2,4-dinitrophenylhydrazone m. 228-30° (from EtOH). This (32 g.) added slowly in Et₂O, concurrently with a stream of CaH_2 , to 2 g. powd. KOH in Et₂O at -2°, with continuation of CaH_2 for 8 hrs., gave, upon the usual aq. treatment, 2.9 g. of a compd. (III), b.p. 130-41°, which forms a glasslike mass on cooling; HCl salt, m. 121-3°; hydrogenation of III over Pt yields the Et analog, b.p. 140-2° (HCl salt, m. 97-107° (?)). Addn. of 7.8 g. II to RMgBr from 12 g. EtBr and 20 g. $CH_3CHC \equiv CH$ in Et₂O and stirring 5 hrs. at room temp. and 1 hr. at reflux gave 0.1 g. of a compd. (IV), b.p. 150-5°, glassy solid, softening at 50-60° (HCl salt, m. 110-210° (?)), while hydrogenation of IV gave the Bu analog, b.p. 137-40° (HCl salt, m. 91-158°). II (9 g.) with PhLi from 1 g. Li and 12 g. PhBr in Et₂O gave 8.0 g. of a compd. (V), b.p. 160-8°, softening at 52-8° (HCl salt, m. 105-67°); treatment with Ac_2O in presence of H_2SO_4 gave after 8 hrs. at room temp. and 2 hrs. at 70° the corresponding acetate, b.p. 158-61°, a glassy mass (HCl salt, m. 142-77°), while (EtO)₂ similarly gave the propionate, b.p. 172-4°, softening at 52-5° (HCl salt, m. 150-75°).

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G. M. Kosolapoff

1951

S/079/60/030/04/33/080
B001/B016

AUTHORS: Matsuyan, S. G., Chukhadzhyan, G. A., Vartanyan, S. A.

TITLE: Reaction of Acetylene Carbinols With Acetic Acid in the
Presence of Mercuric Acetate, and the Formation Mechanism
of Acetoxy Ketones

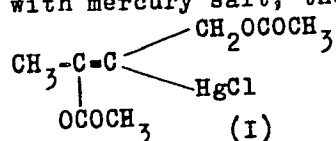
PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 4, pp. 1202-1207

TEXT: In continuation of the papers by I. N. Nazarov (Ref. 1) and G. F. Hennion (Ref. 2) dealing with the synthesis of acetyl carbinol acetates, the authors of the present paper performed a more convenient synthesis of acetoxy ketones by boiling the acetic acid solutions of acetylene alcohols in the presence of mercuric acetate, with subsequent fractionation of the reaction mixture. The corresponding acetates of the tertiary acetyl carbinols thus resulted from dimethyl-, methyl-ethyl-, methyl-isopropyl-, diisopropyl-, methyl-phenyl-ethynyl carbinol as well as from 1-ethynyl-cyclohexanol-1. By heating the disubstituted butin-2-ol-1 with glacial acetic acid in the presence of mercuric acetate, methyl- β -acetoxy-ethyl ketone is formed. On reaction of the acetate of butin-2-ol-1

Card 1/3

Reaction of Acetylene Carbinols With Acetic Acid S/079/60/030/04/33/080
in the Presence of Mercuric Acetate, and the B001/B016
Formation Mechanism of Acetoxy Ketones

with mercury salt, the addition product (I) was separated:



Scheme 1 illustrates the mechanism of this reaction which is confirmed by schemes 2 and 3. Methyl-β-acetoxy-ethyl ketone (V) is obtained, in this connection, as end product. The formation mechanism of the acetates of acetyl carbinols from monosubstituted acetylene alcohols on reaction with acetic acid in the presence of mercuric acetate may be illustrated in steps by scheme 5. All resultant α-acetoxy ketones were hydrolyzed by aqueous alcoholic alkali lye to give the corresponding α-keto alcohols (Table). There are 1 table and 10 references, 6 of which are Soviet.

Card 2/3

Reaction of Acetylene Carbinols With Acetic
Acid in the Presence of Mercuric Acetate, and
the Formation Mechanism of Acetoxy Ketones

S/079/60/030/04/33/080
B001/B016

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Armyanskoy SSR
(Institute of Organic Chemistry of the Academy of Sciences,
Armyanskaya SSR)

SUBMITTED: April 20, 1959

Card 3/3

MASAROV, I.N., VARTANYAN, S.A.

Quinoline Derivatives

Acetylene derivatives. Part 145. Heterocyclic compounds. No. 21. Synthesis and transformations of 1,2,6,6-tetramethyl-7-oxa-4-ketodekahydroquinoline., Zhur., ob., khim., 22, no.8, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1952 ~~1953~~, Uncl.

VARTANYAN, S. A.

Chemical Abst.
Vol. 48 No. 8
Apr. 25, 1954
Organic Chemistry

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/ Acetylene derivatives. CXLVI. Heterocyclic compounds. 22. Action of primary amines on 1,5-dimethoxy-3-hexanone-7-methoxy-5-isobutyl-1,5-heptadien-4-one. N. Nazarov and S. A. Vartanyan. *J. Gen. Chem. (U.S.S.R.)* 22, 1709-1710 (1952) (Engl. translation).—See C.A. 47, 0908g. CXLVII. Synthesis of β -amino ketones by the action of secondary amines on β -methoxy ketones. *Ibid.* 1837-41.—See C.A. 47, 0909b. H. L. H. —

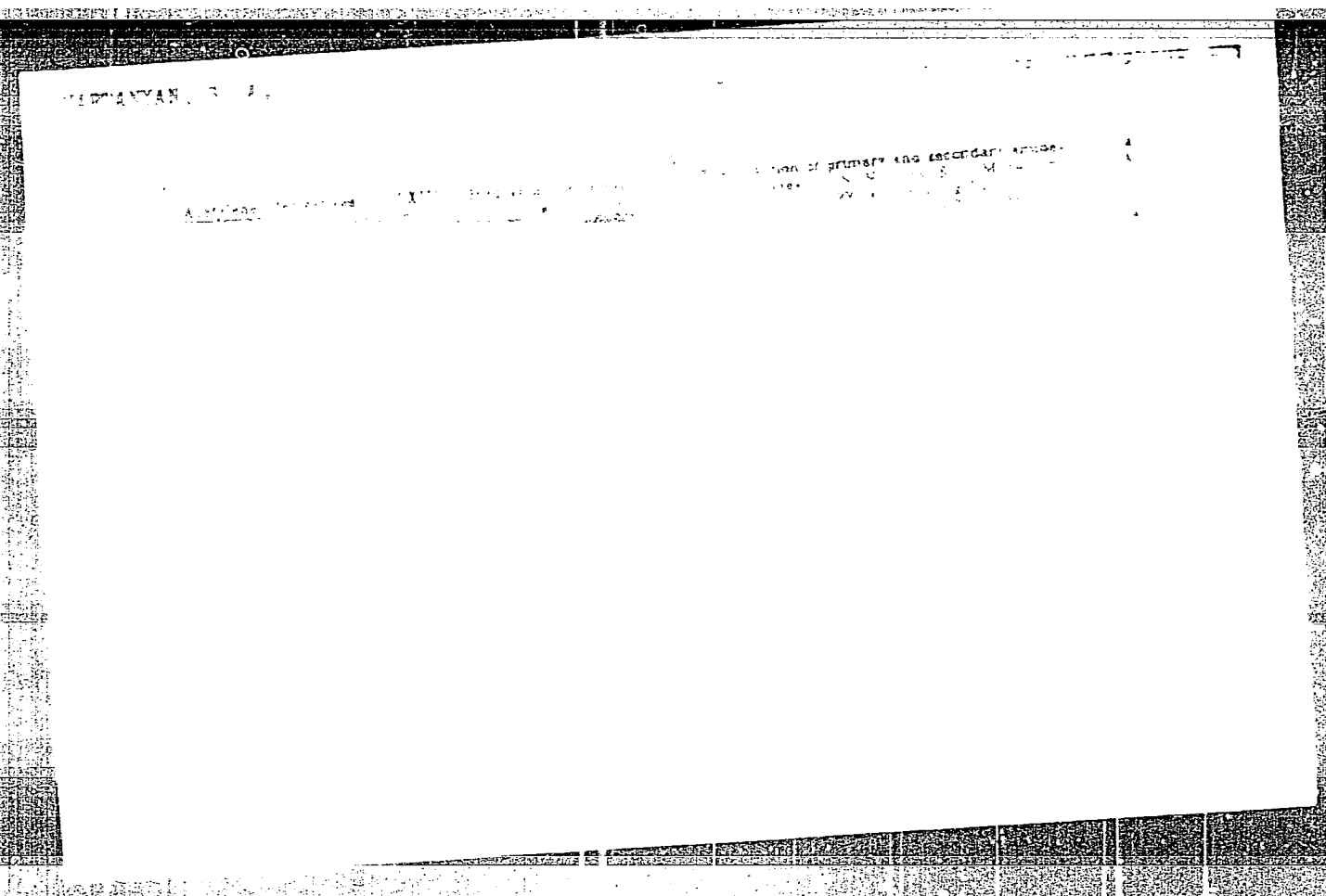
NAZAROV, I.N.; VARTANYAN, S.A.

Acetylene derivatives. CXLVII. Synthesis of β -amino ketones by the
action of secondary amines on β -methoxy ketones. Zhur. Obshchey Khim.
22, 1794-1803 '52. (MLRA 5:11)
(GA 47 no.19:9969 '53)

NAZAROV, I.N.; VARTANYAN, S.A.

Acetylene derivatives. Part 149. Synthesis of α -amino ketones by the reaction of secondary amines with α -methoxyketones and α , β -unsaturated ketones. Izv. AN SSSR, Otd.khim.nauk. no.2:314-320 Mr-Apr '53. (MLRA 6:5)

1. Khimicheskiy institut Akademii nauk Armyanskoy SSSR. (Ketones)



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APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710011-9"

NAZAROV, I.N.; MATSOYAN, S.G.; VARTANYAN, S.A.

Acetylene derivatives. Part 164. Action of primary and secondary amines on tetrahydro-4-pyrones. Zhur.ob.khim.23 no.12:1990-1994 D '53. (MLRA 7:2)

1. Institut organicheskoy khimii Akademii nauk SSSR.
(Pyrones) (Amines)

YAN, AN, -5

USSR.

Condensation of HCN with β -alkoxy ketones. I. S. A. Vortyan and R. S. G. Kerkhyan. *Izv. Akad. Nauk SSSR, Ser. Khim. Esters. i Tekh. Nauk* 17, No. 5, 45-6 (1964) in Russian; cf. C. 2, 39, 17525. β -Alkoxy ketones, like other C=O compds., are easily condensed with HCN to form the corresponding β -alkoxy- α -cyano derivatives (I). 30% HCN (II) is added stepwise to a continuous shaken aq. soln. of KCN or NaCN and the ketone at 10-20°. The oily layer is sepd., combined with the EtO ext. of the aq. layer, dried over Na₂SO₄, and dist. *in vacuo* to give I. The following 5-hexanols are prepd. from the corresponding ketone with an alkali cyanide (substituent, % yield, b.p./mm., n_D^{20} , d_4^{20} given): 1,5-di-MeO-3-NC, 64.7, 65-7°/3, 1.4315, 1.0311; 1,5-di-MeO-2-Me-3-NC, 47, 110-21°/13, 1.4370, 0.9900; 1-Me-5-Me-3-NC, 47, 115-17°/14, 1.4370, 0.9982. Other nitriles were: 1-methoxy-4-cyano-3-butanol, b.p. 104-6°, n_D^{20} 1.4220, d_4^{20} 0.9956, 70.8%; 2-methyl-4-cyano-1-hydroxytetrahydropyran, b.p. 120-2°, n_D^{20} 1.4575, d_4^{20} 1.0503, 74%; 2,2-dimethyl-4-cyano-1-hydroxytetrahydropyran, m. 62-3° (from C₆H₆), 55.6%. Elisabeth Barabash

AB

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Varianyan, H

Condensation of HCN with β -alkoxy ketones. H. S. A. Varianyan and R. S. Gzuli-Kevkhya. *Izv. Akad. Nauk Arm. S.S.R. 7, Ser. Fiz.-Mat. Estestven. i Tekh. Nauk* No. 6, 61-4(1954)(in Russian); *J. C.A. 49, 6937c*.—Me β -alkoxy ketones, obtained by hydration of $\text{CH}_2=\text{CHC}(\text{OR})\text{CH}_3$ in aq. solns. of alics., are easily condensed with HCN, forming corresponding γ -alkoxy- α -hydroxynitriles, colorless, mobile liquids with specific cyanide odor. The following $\text{MeC}(\text{OH})(\text{CN})\text{CH}_2\text{CH}_2\text{OR}$ were prepd. as described (*loc. cit.*) (R, % yield, b.p./mm. ($^{\circ}\text{C}$), n_D^{20} and d_4^{20} given): Et, 66, 107-8/22, 1.4324, 0.9630; Pr, 33.3, 120-1/20, 1.4275, 0.9611; iso-Pr, 30.0, 99-100/14, 1.4243, 0.9471; Bu, 31.8, 124-5/10, 1.4290, 0.9400; iso-Bu, 30.1, 120-1/17, 1.4265, 0.9312; iso-Am, 43.1, 132-3/16, 1.4315, 0.9271.

Elisabeth Barabash

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1965

Acetylene derivatives. CLXI. Synthesis and transformations of methyl 2-cyanoethylvinylethynylcarbamate. N. Nazarov, S. A. Vartanyan, and V. N. Zhamagortsyan. *J. Gen. Chem.* 33:2-24, 1959-24 (1959) (Engl. translation).—See C.A. 49, 13890g.

Acetylone derivatives. CLXI. Synthesis and transformation of methyl-2-thoxyethylvinylthynylcarbinol. I. N. Nazarov, S. A. Vartanyan, and V. N. Zharnagortskan. *Zhur. Khim. Fiz.* 24, 1053-8 (1954); cf. C.A. 49, 927e, 8477j. -Into EtMgBr from 380 g. EtBr in Et₂O was added 200 g. CH₃CH=CHAr at -18° and the sun allowed to start overnight, when it was refluxed until C₂H₄ evolution stopped. The resulting CH₃CH=CHCMgBr was treated over 6 hrs. with ArCH₂CH₂OEt at below 5°; on the following day the mixt. was refluxed 40 min. and hydrolyzed with ice-10% HCl, yielding 300 g. EtOCH₂CH=CHAr (C₁₀H₁₄O, C₁₀H₁₄, d₄ 0.84-0.9, n_D 1.4360, n_D 1.4745, which polymerizes to a glassy product on standing). Hydrogenation of I over Pt gave EtOCH₂CH₂CMgBr (b_p 83°, d₄ 0.9290, n_D 1.4350, the same product, b_p 93-4°, d₄ 0.8755, n_D 1.4560, was prepd. from the above ketone and BuMgBr. Heating 41 g. I (stabilized with pyrogallol), 129 g. t-BuOH, and 2 g. HgSO₄, 3 hrs. at 55° at first, then at 40°, while 4 g. HgSO₄ was added portionwise, gave 35.5 g. EtOCH₂CH=CHAr (CH₃CH=CHOMe (III), b_p 108-9°, d₄ 0.9613, n_D 1.4640, which hydrogenated over Pt to 5-methyl-2-methoxy-7-thoxy-2-heptanone, b_p 98-9°, d₄ 0.9302, n_D 1.4389). Oxidation of the unsatd. ketone with KMnO₄ gave ArCH₂CH₂OEt and MeOCH₂CH₂CO₂H. Heating 11 g. with p-MeC₆H₄SO₃H in the presence of pyrogallol to 100° in vacuo gave EtOCH₂CH=CHMe (CH₃CH=CH₂, b_p 71-2°, d₄ 0.8185, n_D 1.4770 (which polymerizes on standing).

N. NAZAROV, S. A. YAPTONYAN, AND Y. A. ZERNAGORITSYAN

which hydrogenated over Pt to $\text{EtOCH}_2\text{CH}_2\text{CHMeCH}_2\text{COEt}$, b. 65-67°, d. 0.8327, n_D²⁰ 1.4310. Heating 149 g. I, 0.665 g. pyrogallol, and 149 g. 50% H_2SO_4 1.3 hrs. at 80° gave 80 g. $\text{EtOCH}_2\text{CH}_2\text{C}(\text{CH}_3)_2\text{CCH}(\text{CH}_3)_2$ (III), b. 67-69°, d. 0.8636, n_D²⁰ 1.4379, which polymerizes rapidly on standing; hydrogenation over Pt in EtOH gave $\text{EtOCH}_2\text{CH}_2\text{CHMeCH}_2\text{CHMeCH}_2\text{CH}_2\text{CHMe}$, b. 83°, d. 0.7839, n_D²⁰ 1.4130. III (136 g.) was added to a refluxing mixt. of 500 g. 90% MeOH, 2 ml. H_2SO_4 , and 2 g. HgSO_4 ; after heating 28 hrs. with gradual addn. of 30 g. HgSO_4 , there was isolated 79 g. $\text{EtOCH}_2\text{CH}_2\text{C}(\text{CH}_3)_2\text{COCH}_2\text{CH}(\text{OMe})\text{Me}$, b. 100-2°, d. 0.9302, n_D²⁰ 1.4550, which hydrogenated over Pt to satd. analog, b. 90-100°, d. 0.9232, n_D²⁰ 1.4363. Oxidation of the unsatd. ketone with KMnO_4 gave EtCO_2H , $\text{EtOCH}_2\text{CH}_2\text{CO}_2\text{H}$, $\text{MeOCHMeCH}_2\text{CO}_2\text{H}$ (isolated as Ag salt). The unsatd. ketone heated with $p\text{-MeC}_6\text{H}_4\text{SO}_3\text{H}$ in the presence of pyrogallol at 100° readily gave $\text{EtOCH}_2\text{CH}_2\text{C}(\text{CH}_3)_2\text{COCH}(\text{CH}_3)\text{CHMe}$, b. 81-2°, d. 0.9347, n_D²⁰ 1.4769, which hydrogenated over Pt to $\text{EtOCH}_2\text{CH}_2\text{CHMeCOPr}$, b. 74-5°, d. 0.8990, n_D²⁰ 1.4345.

G. M. Kosolapoff

VARTANYAN, SARKID AMBARTSUMOVICH

VARTANYAN, Sarkid Ambartsumovich (Chemical Inst of Acad Sci AR SSR).
Academic degree of Doctor of Chemical Sciences based on his defense, 31 March 1955, in the Council of the Inst of Organic Chemistry, Acad Sci USSR, of his dissertation entitled: "Syntheses and conversion of alkozyketones and vynilacetylene alcohols with alkoxy groups."

For the Academic Degree of Doctor of Sciences.

Byulleten' Ministerstva Vysshego Obrazovaniya SSSR, List No.8, 14 April 1955
Decision of Higher Certification Commission Concerning Academic Degrees and Titles.

JPRS 512

MATSOYAN, S.G.; VARTANYAN, S.A.

Transformations of methyl- β -alkoxyethylketones. Izv. AN Arm. SSR. Ser.
FMT nauk 8 no.2:31-36 Mr-Apr '55. (MIRA 8:7)

1. Khimicheskiy institut Akademii nauk Armyanskoy SSR.
(Ketones)

VARTANYAN, S. A.

Acetylene derivatives. CLXII. Synthesis and transformations of methyl-2-butoxyethyl(vinylethynyl)carbinol. S. A. Vartanyan, V. N. Zhamagoritsyan, and I. N. Nazarov. *Zh. Obshch. Khim.* 25, 109-114; *J. Gen. Chem. (U.S.S.R.)* 25, 91-6 (1955) (Engl. translation); *C.A.* 49, 6817h, 13899g. —Passing $\text{CH}_2=\text{CH}:\text{C}\equiv\text{CH}$ (200 g.) over 5 hrs. into EtMgBr (from 300 g. EtBr) at -18° , followed, on the next day by 1 hr. at room temp. and 40 min. at reflux, and addn. over 6 hrs. of 230 g. $\text{BuOCH}_2\text{CH}_2\text{Ac}$ in Et_2O , allowing the mixt. to stand overnight with cooling, and then refluxing 0.5 hr., gave after hydrolysis with 10% H_2SO_4 73.5% $\text{BuOCH}_2\text{CH}_2\text{CMe}(\text{OH})\text{C}\equiv\text{CH}:\text{CH}_2$ (I), b_p 109-11°, d_4^{20} 0.9092, n_D^{20} 1.4713; hydrogenation over Pt gave the *satd.* analog, b_p 104°, d_4^{20} 0.8683, n_D^{20} 1.4360, identical, with sample prepd. from BuMgBr and the corresponding ketone (this sample, b_p 108°, n_D^{20} 1.4400). I (86 g.) was stirred 8 hrs. at 35-40° with 258 g. MeOH , 3 g. HgSO_4 , and a little pyrogallol, while 7 g. HgSO_4 was being gradually added; after distn. there was obtained 58.3 g. 3-methyl-7-methoxy-1-butoxy-3-hepten-5-one, b_p 142-3°, d_4^{20} 0.9420, n_D^{20} 1.4508, which failed to yield cryst. derivs. Hydrogenation of the ketone over Pt gave 3-methyl-7-methoxy-1-butoxy-5-heptanone, b_p 130-1°, d_4^{20} 0.9212, n_D^{20} 1.4404, while oxidation of the unsatd. ketone with KMnO_4

gave $\text{AcCH}_2\text{CH}_2\text{OBu}$, b_p 177-81°, n_D^{20} 1.4215 (2,4-dinitrophenylhydrazon, m. 211-12°), and $\text{MeOCH}_2\text{CH}_2\text{CO}_2\text{H}$, b_p 200-2°, n_D^{20} 1.4204. Stirring 130 g. I with 135 g. 50% H_2SO_4 2 hrs. at 68-70° gave 80 g. $\text{BuOCH}_2\text{CH}_2\text{C}(\text{CH}_3)\text{C}\equiv\text{CH}:\text{CH}_2$, b_p 100-2°, d_4^{20} 0.8612, n_D^{20} 1.4920, which rapidly polymerized on standing to a solid polymer. Hydrogenation of the enyne (I) over Pt oxide gave 1-butoxy-3-methylheptane, b_p 87°, d_4^{20} 0.7979, n_D^{20} 1.4259. II (100 g.) stirred with 650 g. 90% MeOH , 4 g. HgSO_4 , 1 ml. H_2SO_4 and a little pyrogallol 20 hrs. at 62-5° gave 43 g. 5-methoxy-2-(2-butoxyethyl)-1-hexen-3-one, b_p 120-0°, d_4^{20} 0.9403, n_D^{20} 1.4576, (III); the product before redistn. contained some 2-(2-butoxyethyl)-1,4-hexadien-3-one (IV). Hydrogenation of III over Pt gave

3-methyl-6-methoxy-1-butoxyheptan-4-one, b_p 119-20°, d_4^{20} 0.9149, n_D^{20} 1.4389. Oxidation of III with KMnO_4 gave HCO_2H , $\text{MeOCHMeCH}_2\text{CO}_2\text{H}$, b_p 109-11°, n_D^{20} 1.4214, whose Ag salt was prepd. for analysis, and $\text{BuOCH}_2\text{CH}_2\text{CO}_2\text{H}$, b_p 116-18°. Heating 20 g. III 0.5 hr. to 165° at 15 mm. with 0.1 g. $p\text{-MeC}_6\text{H}_4\text{SO}_3\text{H}$ gave 6 g. IV, b_p 109-10°, n_D^{20} 1.4700, d_4^{20} 0.9292, which hydrogenated over Pt oxide to 3-methyl-1-butoxy-4-heptanone, b_p 93-4°, d_4^{20} 0.8567, n_D^{20} 1.4335. (2)
G. M. Kosolapoff

precipitate at 100° for 1 hr. CNH₂Ac. I treated with
2,4-dinitrophenylhydrazine in hot EtOH gave 1,4-dimethyl-
1-(2,4-dinitrophenyl)hydrazine at 150-155°; the same re-

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9.5 g. 1,2-Dichloroethane, 5 g. 2-Ethoxyethanol, 10 ml. EtOH in ampoule
10. 10 g. 1,2-Dichloroethane, 5 g. 2-Ethoxyethanol, 10 ml. EtOH in ampoule

8.8.84

VARTANYAN, S.A.; MATSOYAN, S.G.; MUSAKHANYAN, G.A.

Isomerization of 1-dialkylamine-2, 4 diene systems. Izv. AN Arm.
SSR. Ser. FMET Nauk 9 no.10:29-35 '56. (MIRA 10:4)

1. Khimicheskiy institut AN Armyanskoy SSR.
(Isomerization)

VARTANYAN, S.A.: BADANYAN, Sh.O.

Addition of secondary amines to vinyl-acetylene alcohols. Izv.
AN Arm. SSR. Ser. FMET nauk 9 no.10:107-111 '56. (MLRA 10:4)

1. Khimicheskiy institut AN Armyanskoy SSR.
(Vinyl compounds) (Amines)

VARTANYAN, S.A.

Synthesis and conversion of β -alkoxy ketones. Trudy Inst.khim.AN
Gruz.SSR 12:181-203 '56. (MLRA 10:5)

1. Institut khimii Akademii nauk Armyanskoy SSR.
(Ketones)

VARTANYAN, S. A.

USSR/Chemistry of High Molecular Substances.

F

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 27055.

Author : Vartanyan, S.A., Pirenyan, S.K.
Inst : Academy of Sciences of Armenian SSR.
Title : To The Question of Polymerization Mechanism of
Acetylene.

Orig Pub: Dokl. AN ArmSSR, 1956, 23, No. 1, 23 - 28.

Abstract: The authors give an account of views of various investigators on the mechanism of acetylene (I) polymerization and assume that the mechanism of I polymerization in presence of Cu^+ is an ion mechanism: first the π -complex of I is formed in the result of the addition of I to Cu^+ , this complex is converted into a carbonium ion, which is stabilized later by producing the π -complex of vinylacetylene. The latter

Card 1/2

VARTANYAN, S.A.; KHAMAGORTSYAN, V.N.; MESROPYAN, E.G.

The chemistry of vinylacetylene. Report No.3: Aminomethylation
of methyl- β -alkoxyethylketones. Izv. AN Arm. SSR. Ser. khim.
nauk 10 no.1:65-70 '57. (MERA 10:9)

1. Khimicheskiy institut Akademii nauk Armyanskoy SSR.
(Pentanone) (Methylation)

VARTANYAN, S.A.

VARTANYAN, S.A.; ZHAMAGORTSYAN, V.N.; BADANYAN, Sh.O.

Chemistry of vinylacetylene. Report No.4: Synthesis and transformation of 1-alkoxypentene-4-yne-2. Izv. AN Arm. SSR Ser. khim. nauk 10 no.2:125-130 '57. (MIRA 10:12)

1. Khimicheskiy institut AN ArmSSR.
(Pentene)

VARTANYAN, S.A.

VARTANYAN, S.A.; TOSUNYAN, A.O.

Chemistry of vinylacetylene. Report No.5: Synthesis and transformations of 1,3-dichloro-5-alkoxypentene-2. Izv. AN Arm. SSR Ser. khim. nauk 10 no.3:195-202 '57. (MIRA 10:12)

1. Khimicheskiy institut AN ArmSSR.
(Pentene)

VARTANYAN, S.A.; BADANYAN, Sh.O.

Chemistry of vinyl acetylene. Report No.6: Addition compounds of
secondary amines with vinyl acetylene alcohols. Izv. AN Arm. SSR.
Ser. khim. nauk v.10 no.5:347-352 '57. (MIRA 11:1)

1. Khimicheskiy institut AN ArmSSR.
(Butenyne)

Distr: 4E43/4E34/

4E26 (J)

Acetylenes derivatives. CHEMICAL. ST. C.
formations of secondary ketones. I. N. Katsun, D. G.
Mukhin, and S. A. Vasilovskiy. Dokl. Akad. Nauk
MSSR, 1978, 27, 1718-20

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VARTANYAN, S. A.

AUTHOR: Nazarev, I. N. (Deceased), Matsuyan, S. G. 72-11-10/56
 Vartanyan, S. A., Zhamagortayan, V. N.

TITLE: Derivatives of Acetylene (Proizvodnyye atsetilena).
 189. Synthesis and Conversions of 3-Vinylethyltetrahydrofuran-
 -3-ols (189. Sintez i prevrashcheniya 3-viniletiniltetragydro-
 furan-3 olov).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 11, pp. 2961-2969 (USSR)

ABSTRACT: The authors succeeded in bringing about the synthesis of 3-vinyl-
 -ethyltetrahydrofurfuranols-3- with a yield of 90% by the action
 of magnesium bromovinylacetylene upon tetrahydrofurfuranol-3-.
 In this manner they obtained 3-vinylethyltetrahydrofurfuranols
 -3- which formed the corresponding 3-butyltetrahydrofurfuranols
 -3- on hydrogenation with a Pt - catalyst after taking up 3 Mol.
 hydrogen. On heating the anhydrous methylalcohol solution in the
 presence of mercury sulfate the vinyl ethyltetrahydrofurfuranols
 as well as other vinyl ethylcarbinols yield dienes (C_nH_{2n-2}).
 In the distillation over potassium bisulfate they are dehydrated
 and yield the corresponding acetylenes. On hydrogenation in al-
 cohol solutions in the presence of a platinum catalyst these acet-
 ylenes take up four molecules of hydrogen and form the correspond-
 ing 3-butyltetrahydrofurfuranols. Thus quite a number of 3-

Card 1/2

Derivatives of Acetylene. 189. Synthesis and Conversions of
3-Vinylethynyltetrahydrofuran-3-ols

79-11-10/56

vinylethynyltetrahydrofuranols - 3 - was synthesized and some of their conversions were investigated (as by isomerization, dehydration, hydration of the corresponding acetylene derivatives and hydrogenation.). There are 3 references, 2 of which are Slavic.

ASSOCIATION: Institute of Organic Chemistry AN USSR imeni N. D. Zelinskiy and Chemical Institute AN Armenian SSR (Institut organicheskoy Khimii imeni N. D. Zelinskogo Akademii nauk SSSR i Khimicheskiiy institut Akademii nauk Armyanskoy SSR).

SUBMITTED: October 15, 1956

AVAILABLE: Library of Congress

1. Acetylene derivatives
2. 3-Vinylethynyltetrahydrofuran-3-ols-Synthesis

Card 2/2

VARTANYAN, S.A.; PIRENYAN, S.K.; MUSAKHANYAN, G.A.

Mechanism of acetylene polymerization. Dokl. AN Arm. SSR 27
no.2:81-85 '58. (MIR 11:10)

1. Khimicheskly institut AN Armyanskoy SSR. Predstavlene V.M.
Tarayan.

(Acetylene) (Polymerization)

VARTANYAN, S.A.; SHAROYAN, E.G.

~~Scintillation properties of 2,5-diphenylfuran.~~ Dokl. AN Arm. SSR
27 no.5:287-288 '58. (MIRA 12:5)

1. Fizicheskiy institut AN Arm. SSR. Predstavleno N.M. Kocharyanom.
(Miran)

AUTHORS: Nazarov, I. N., (deceased), Vartanyan, S.A., SOV/79-28-10-26/60
Matsoyan, S. G.

TITLE: Derivatives of Acetylene (Proizvodnyye atsetilena) CXCV.
Hydration of Divinyl Acetylene and Vinyl Isopropenyl
Acetylene in Alcohol Solutions (CXCV. Gidratatsiya
divinilatsetilena i vinilizoprcpenilatsetilena v spirtovykh
rastvorakh)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 10, pp 2757-2766
(USSR)

ABSTRACT: Nazarov and his collaborators have demonstrated several
times that the divinyl acetylenes easily hydrate and form
dienes on their heating in aqueous methanol solution in the
presence of sulfuric acid and mercury sulfate. The divinyl
acetylene and the symmetrical dienes are the most difficult
ones to hydrate. The dienes formed accumulate methanol
under certain conditions of reaction and are transformed into
 β -methoxy ketones (Scheme 1). It was only a natural
consequence to carry out this hydration also in other alcohols
in order to obtain different β -alkoxy ketones. It turned out
that, depending on the conditions of the reaction, these

Card 1/3

Derivatives of Acetylene. CXCV. Hydration of SOV/79-28-10-26/60
Divinyl Acetylene and Vinyl Isopropenyl Acetylene in Alcohol Solutions

ketones, as well as tetrahydro- γ -pyrones, are formed. In the case of a ramification and a higher molecular weight the velocity of hydration is slowed down. Divinyl acetylene and vinyl isopropenyl acetylene thus are hydratized to the corresponding dienones on their heating in aqueous ethanol, butanol, and isopropenyl alcohol in the presence of mercury sulfate and sulfuric acid. The divinyl acetylene yields the vinyl propenyl ketone and the vinyl isopropenyl acetylene yields the propenyl isopropenyl ketone. The dienes formed affiliate one or two alcohol molecules, depending, on the conditions of the reaction, and are transformed into β -alkoxy ketones. 2-methyl-tetrahydro-4-pyrone (50% yield) is formed as the only reaction product of the hydration of divinyl acetylene in 50% methyl and ethyl alcohol. The alkoxy group arranges itself always in the β -position to the carbonyl group in the affiliation of the alcohols to the dienes. All synthesized β -alkoxy ketones react with primary and secondary amines under the formation of 4-piperidones or β -amino ketones. There are 6 references, 6 of which are Soviet.

Card 2/3

Derivatives of Acetylene. CXCV. Hydration of Divinyl SOV/79-28-10-26/60
Acetylene and Vinyl Isopropenyl Acetylene in Alcohol Solutions

ASSOCIATION: Khimicheskii institut Akademii nauk Armyanskoy SSR
(Chemical Institute of the Academy of Sciences Armyanskaya
SSR)

SUBMITTED: October 15, 1957

Card 3/3

VARTANYAN, S.A.; TERZIAN, A.G.

Chemistry of vinyl acetate. Report no.7: Synthesis and conversions of
 α -aminovinylacetylene alcohols. Izv. AN Arm. SSR khim. nauk 11 no.1:
37-43 '58. (MIRA 11:6)

1. Institut organicheskoy khimii AN ArmSSR.
(Butenyne)

VARTANYAN, S.A.; ZHAMAGORTSYAN, V.N.

Chemistry of vinyl acetate. Report No.8: Synthesis and conversions
of vinylacetylene alcohols, containing α -alkoxy groups, Izv. AN
Arm.SSR. Khim. nauki 11 no.2:99-108 '58. (MIRA 11:11)

1. Khimicheskiy institut AN ArmSSR.
(Butenyne)

VARTANYAN, S.A.; TOSUNYAN, A.O.

Chemistry of vinylacetylene. Report No.9: Conversions of 1,3-dichloro-5-alkoxy-2-pentanone. Izv. AN Arm.SSR. Khim.nauki 11 no.3:177-184 '58. (MIRA 11:11)

1. Khimicheskiy institut AN ArmSSR.
(Pentanone)

VARTANYAN, S.A.; BADANYAN, Sh.O.

Chemistry of vinylacetylene. Report No.10: Addition of secondary amines to ethers of vinylacetylene alcohols and hydration of the formed ethers of acetylene amino alcohols. Izv. AN Arm.SSR. Khim.nauki 11 no.3:185-191 '58. (MIRA 11:11)

1. Institut organicheskoy khimii AN ArmSSR.
(Ethers) (Acetylene)

VARTANYAN, S.A.; TOSUNYAN, A.O.

Chemistry of vinylacetylene. Report No. 11: Synthesis and conversions
of 1,3-dichloro-2-penten-5-ol. Izv. AN Arm. SSR. Khim.nauki 11 no.4:
263-271 '58. (MIRA 11:11)

1. Institut organicheskoy khimii AN ArmSSR.
(Pentenol)

VARTANYAN, S.A.; BADANYAN, Sh.O.

Chemistry of vinyl acetylene. Report No.7: Addition of
dimethylamine to divinylacetylene hydrocarbons. Izv. AN Arm.
SSR. Khim. nauki 11 no.5:343-350 '58. (MIRA 12:1)

1. Institut organicheskoy khimii AN ArmSSR.
(Acetylene) (Dimethylamine)

NAZAROV, I.N. [deceased]; VARTANYAN, S.A.; MATSOYAN, S.G.

Acetylene derivatives. Part 194: Hydration of bivinyl acetylene
in alcoholic solutions. Zhur.ob.khim. 28 no.10:2757-2766 0'58.
(MIRA 11:12)

1. Khimicheskiy institut AN Armyanskoy SSR.
(Acetylene) (Hydration)